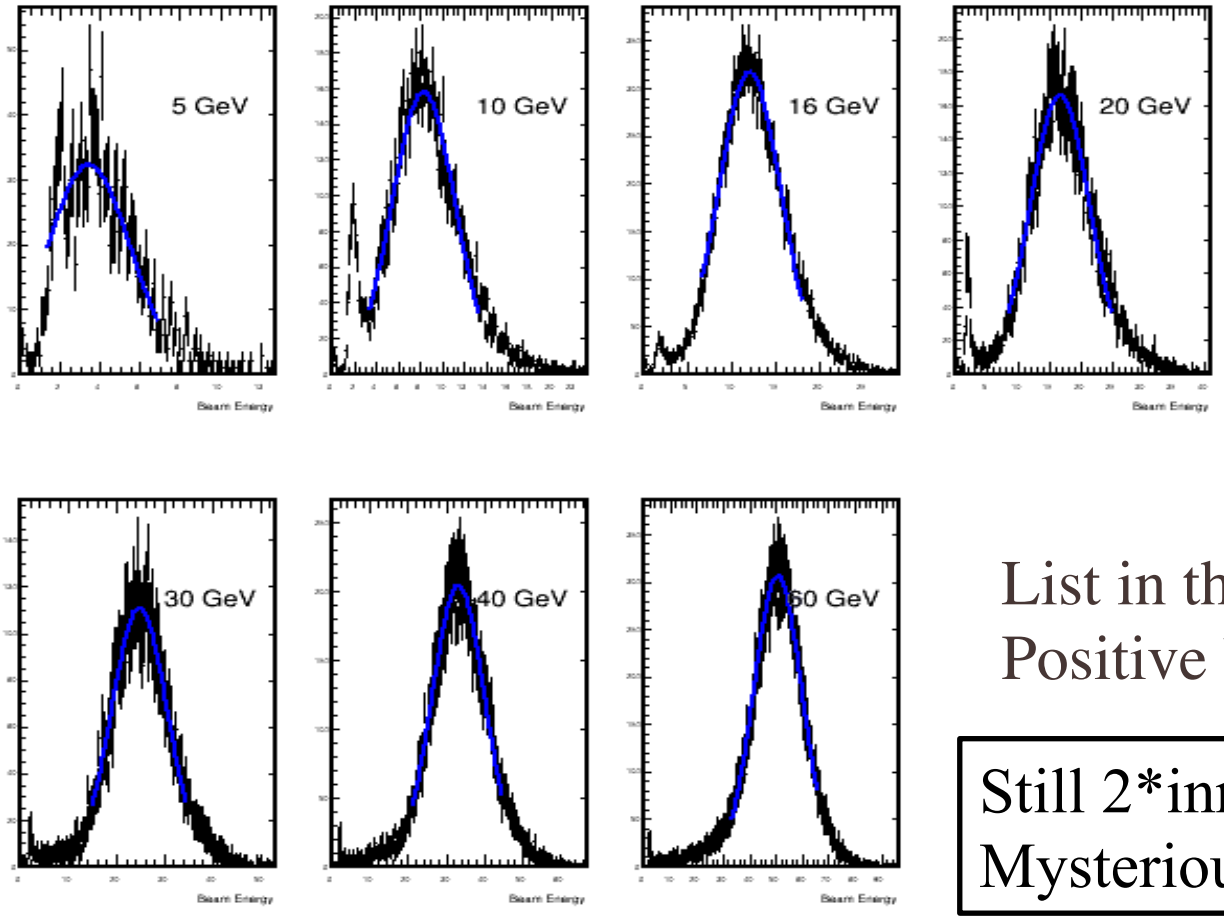
HCAL testbeam data checks

HCAL standalone runs

- Edward collected some HCAL standalone runs

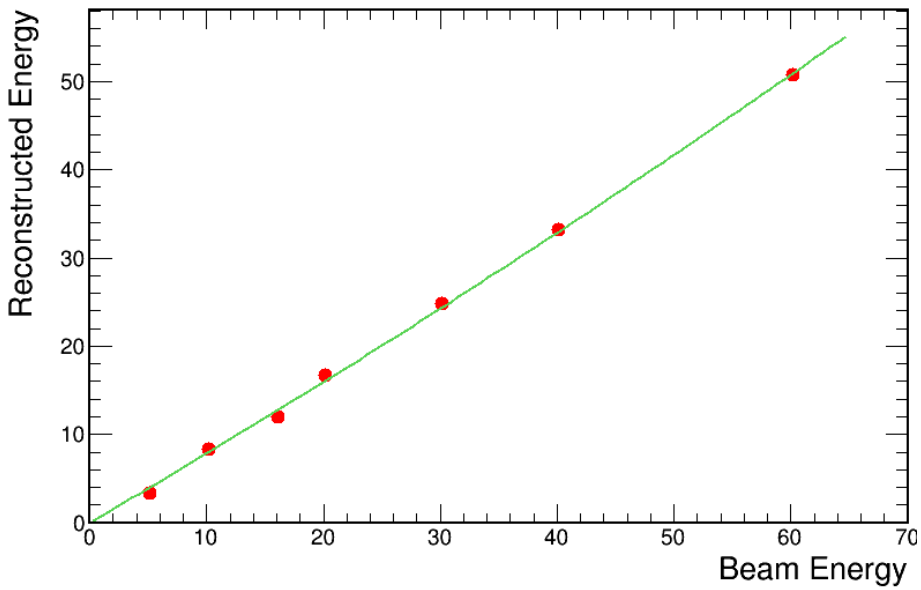


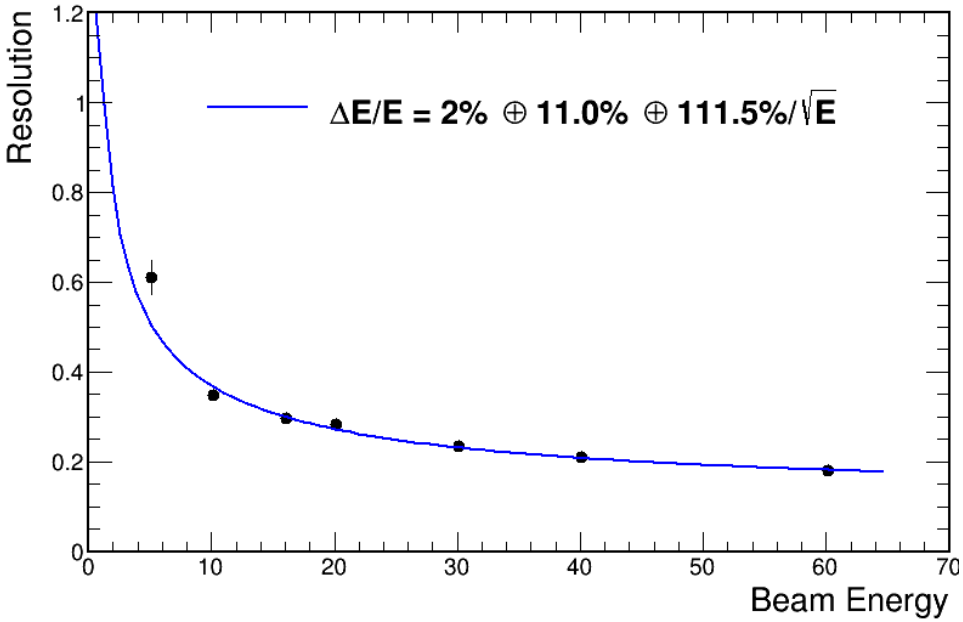
List in the wiki.
Positive beams (!)

Still 2*inner+outer (!)
Mysterious factor.

Calibrations are not optimized yet. A first look.

Linearity and resolution

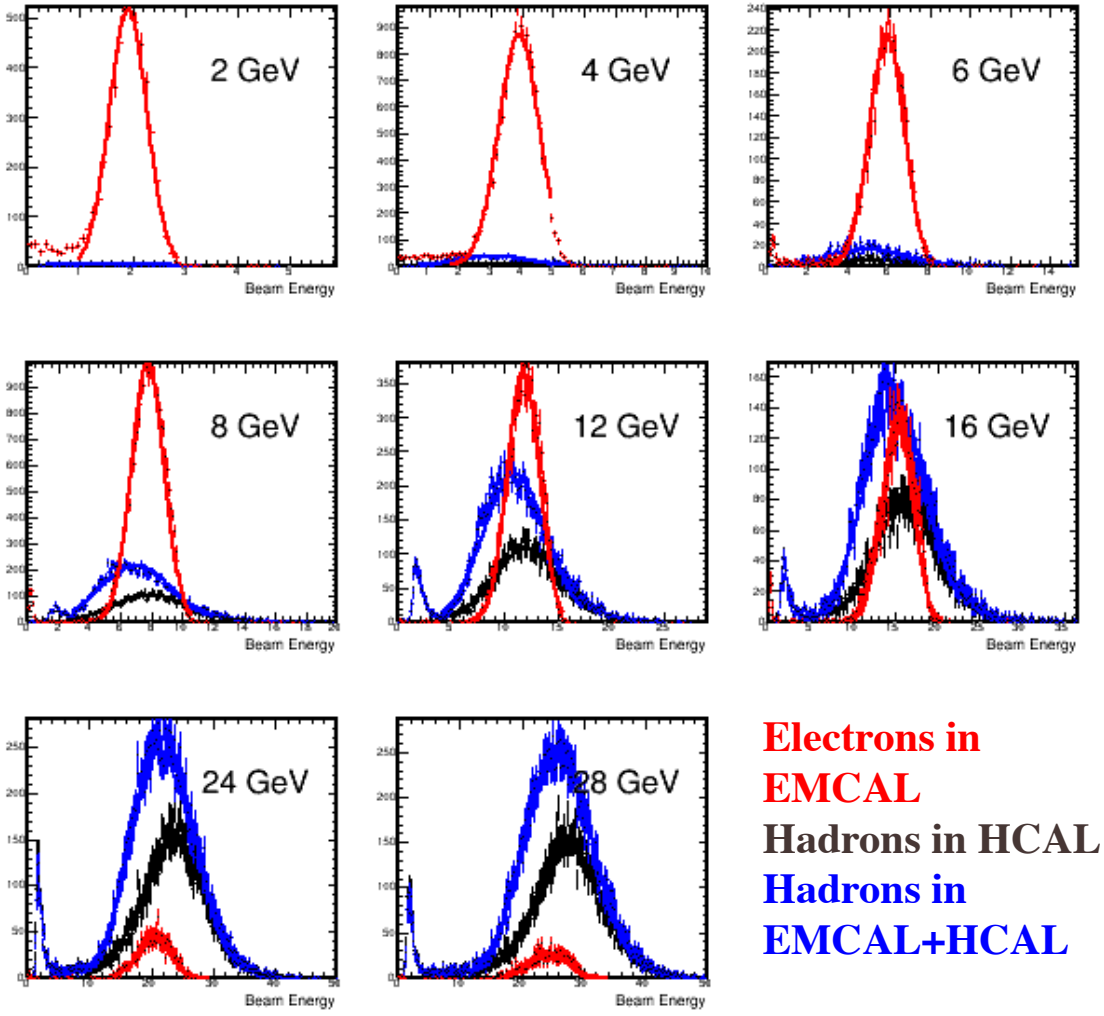


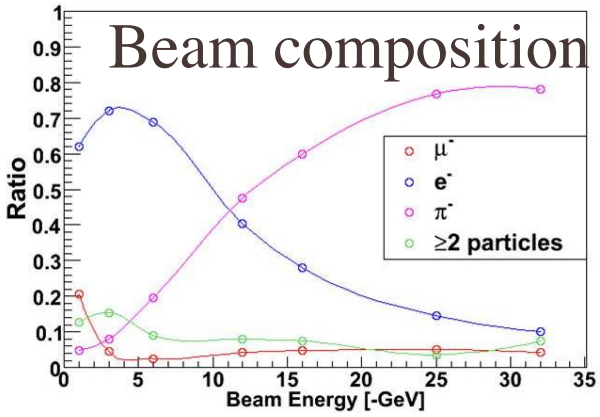


- Linearity looks good till 60 GeV, no saturation observed.
- Resolution > 100% (!)
- Need HCAL dedicated run for few days, specially at low energies.

Full e/pi checks from Prototype2

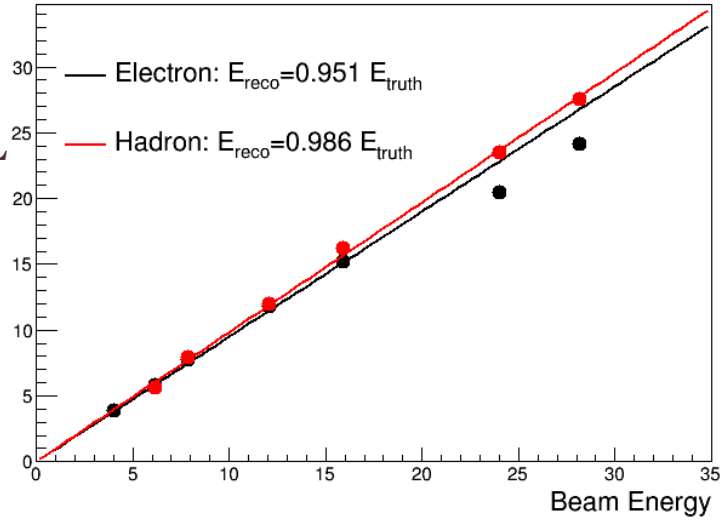
Hadrons & Electrons





EMCAL and HCAL both calibrated separately.

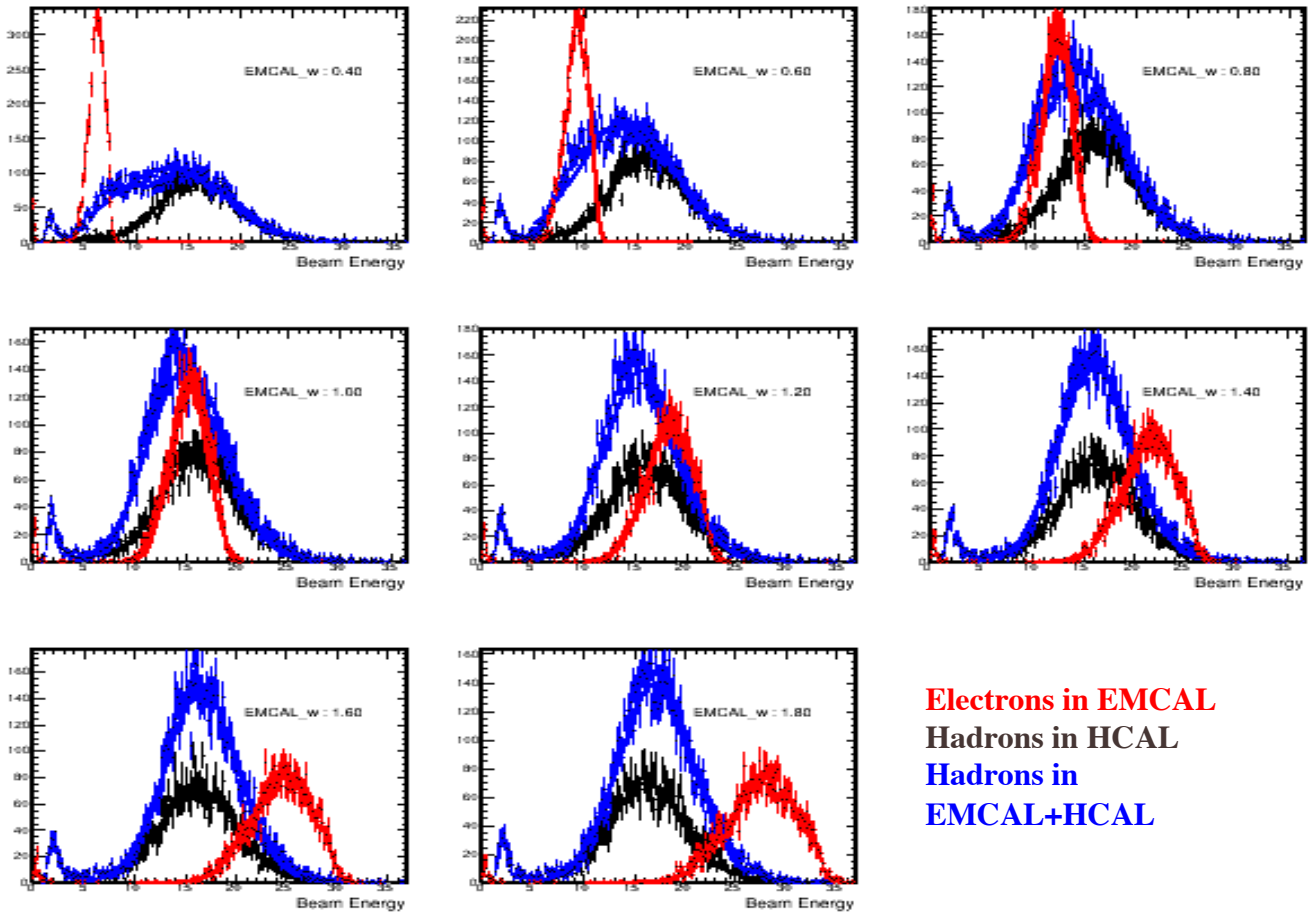
Electrons in EMCAL
Hadrons in HCAL
Hadrons in EMCAL+HCAL



How the data looks like from FTBF.

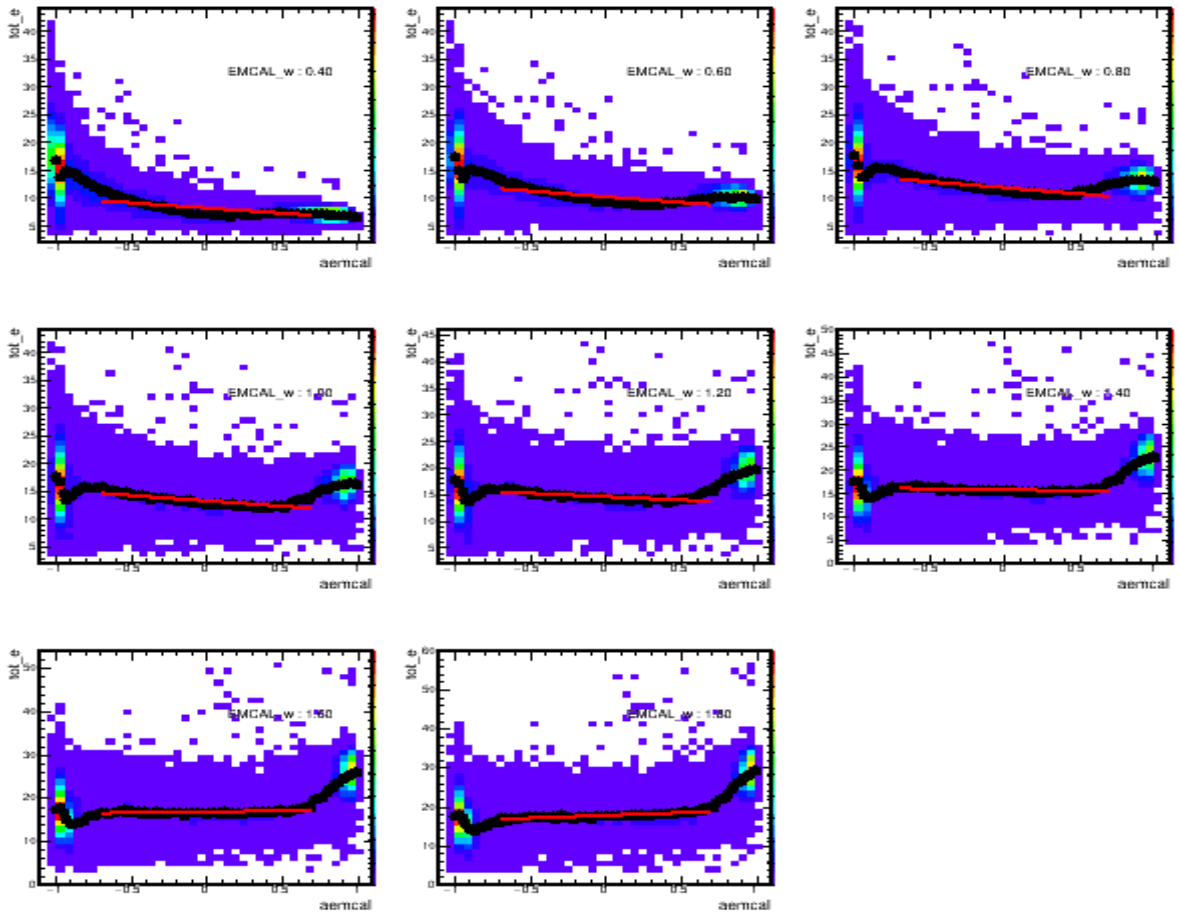
Vary EMCAL weights 16 GeV

- Good fractions of hadrons start showering in EMCAL.
- Needs to adjust EMCAL weight to add hadron energy to HCAL.

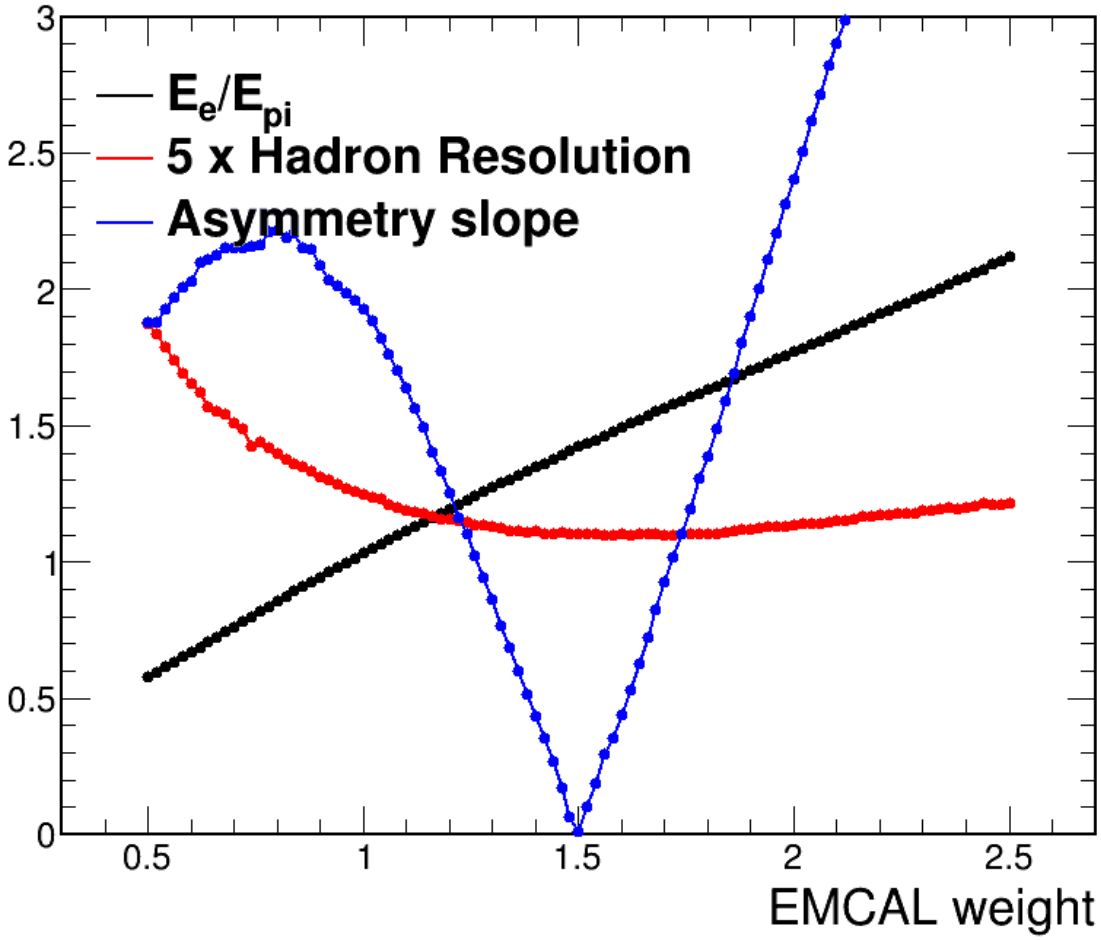


Vary EMCAL weights 16 GeV

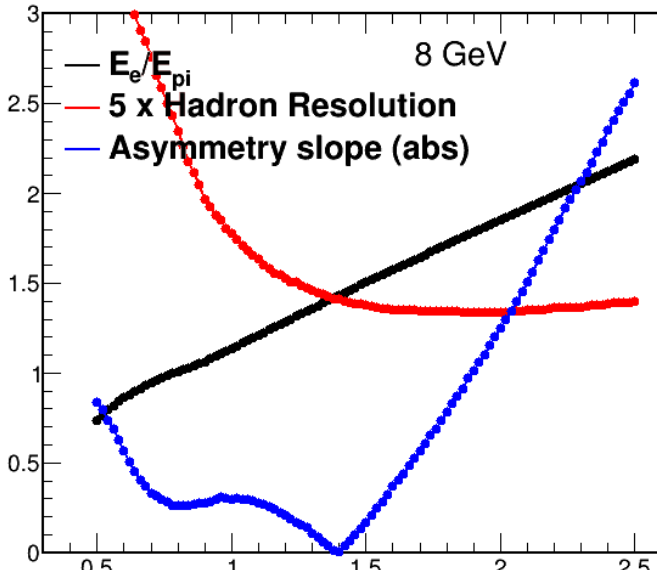
- Needs to adjust EMCAL weight to add hadron energy to HCAL.
- Look at the total energy vs asymmetry for different weights

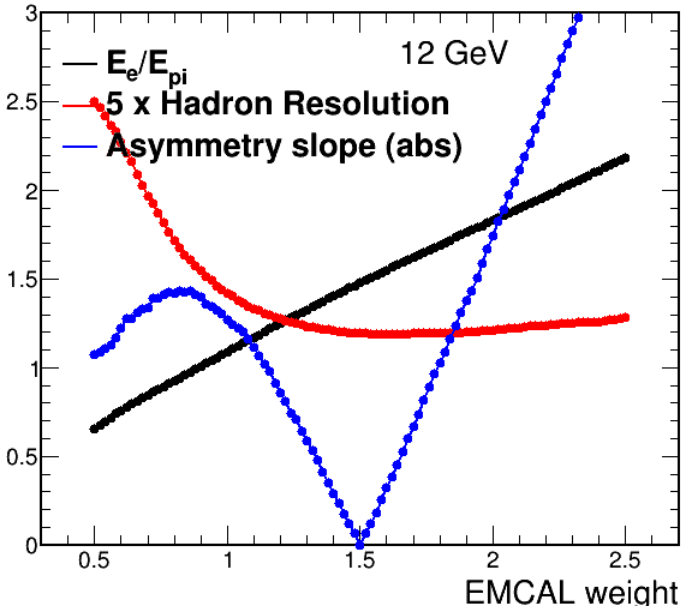


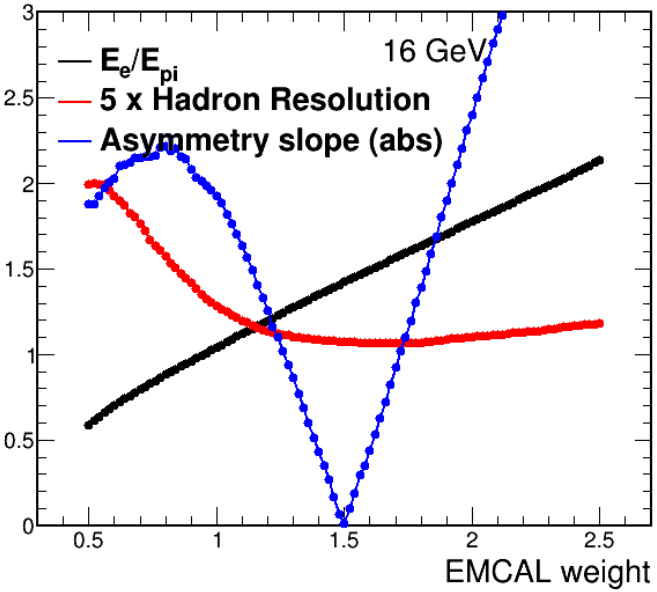
16 GeV

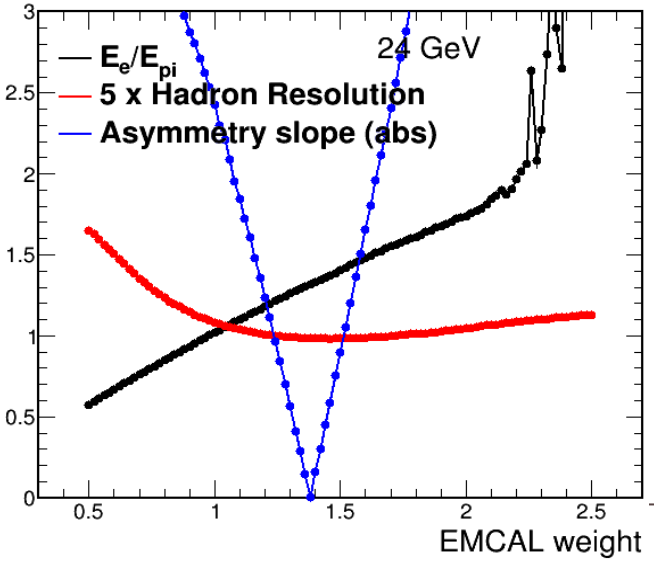

E_e/E_{pi}
5 x Hadron Resolution
Asymmetry slope
3
2.5
2
1.5
1
0.5
0
0.5
1
1.5
2
2.5
EMCAL weight

All energies









e/pi vs energy